U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Jewett White Lead Removal (2000-2012 Richmond Terrace) - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: **POLREP #3**
Jewett White Lead Removal (2000-2012 Richmond Terrace)
A218
Staten Island, NY
Latitude: 40.6396512 Longitude: -74.1304207

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From: Mark Gallo, On-Scene Coordinator

Date: 1/13/2013

Reporting Period: December 17, 2012 - January 11, 2013

1. Introduction

1.1 Background

Site Number:	A218	**Contract Number:**	EP-S2-10-03
D.O. Number:	0056	**Action Memo Date:**	12/21/2011
Response Authority:	CERCLA	**Response Type:**	Non-Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/3/2012	**Start Date:**	9/27/2012
Demob Date:		**Completion Date:**	
CERCLIS ID:	NYD980531545	**RCRIS ID:**	NYD980531545
ERNS No.:	NA	**State Notification:**	
FPN#:	NA	**Reimbursable Account #:**	NA

1.1.1 Incident Category

This removal action involving the excavation and off-site disposal of lead contaminated soil is being performed by the U.S. Environmental Protection Agency under the removal authority pursuant to Section 104(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (“CERCLA”), 42 U.S.C Section 9604(a) and Section 300.415 of the National Contingency Plan (“NCP”), 40 Coder of Federal Regulations (“CFR”) Part 300.

1.1.2 Site Description

Historically, John Jewett & Sons White Lead Company operated a white lead manufacturing facility which originated at 2015 Richmond Terrace where it owned and operated the Site from 1839 until 1890. White lead was formerly used as an ingredient for lead paint. Lead was added to paint to speed drying, increase durability, and resist corrosion from moisture.

On April 3, 1890, National Lead and Oil Company of New York ("National Lead") acquired the Site property. National Lead continued the manufacture of white lead at the Site, and extended the operations across the street to include the 2000 Richmond Terrace property. National Lead owned and operated at both Site properties until approximately 1943.

The Jewett White Lead Site at 2000-2012 Richmond Terrace, Staten Island, NY is an approximate 1 acre site that is located in a commercial/industrial area. Previous investigations on site have shown the site to contain lead contaminated soils. Contamination exists across the site on the surface and at depth. Depths of contamination range from 1 foot to possibly 8 ft in some locations. The average depth of excavation required to meet the removal action clean up goal of 800 ppm is approximately 3-5 ft.

Businesses are located to the north and east of the site with an abandoned, elevated rail line along the south border of the site. Just beyond the abandoned rail line to the south is a residential area. Two bus stops are located adjacent to the site, one to the northeast on Richmond Terrace and the other on Park Ave to the west. Richmond Terrace to the north/east is a primary road along the north shore of Staten Island. It can contain higher volumes of vehicular and pedestrian traffic.

1.1.2.1 Location

2000-2012 Richmond Terrace
Staten Island, NY 10302

1.1.2.2 Description of Threat

The site contains elevated levels of lead in the soil. Lead is a hazardous substance and is acutely and chronically toxic. The effects of lead are the same whether it enters the body through inhalation or ingestion. Lead can affect many systems and organs within the body. The main target for lead toxicity is the central nervous system. Elevated levels of lead have been identified horizontally and vertically within the site soils. The threat of migration exists if soils on site are disturbed without the implementation of proper engineering controls. Off site migration could impact residences and businesses surrounding the site.

The conditions at the Site meet the criteria for implementation of a CERCLA removal action under Section 300.415(b) of the NCP. The release and potential further release of hazardous substances at and from the Site presents a threat to public health, or welfare, or the environment.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In December 2008 EPA collected soil samples from 16 test pits at the Site that were excavated to a depth of approximately four feet below grade. The analytical results from the sampling event in December 2008 revealed the presence of elevated levels of lead throughout most of that property, both laterally and with depth. The average surface lead concentration was 5,081 milligrams/kilogram (mg/kg). The highest lead concentration detected at the surface was 37,100 mg/kg, near the gate on Park Avenue. The average lead concentration in the soil samples collected at depths of 1-foot, 2-foot, and

3-foot below grade were 28,245 mg/kg, 61,201 mg/kg, and 53,398 mg/kg, respectively. The highest lead concentration detected in the subsurface was 240,000 mg/kg.

In October of 2010 EPA conducted additional investigations to determine the extent of lead contamination at the Site. The field screening results from the sampling event in October indicated that the elevated levels of lead were confined to the upper four feet of soil with the exception of a small well defined area located in the southwest comer of the property adjacent Park Ave. The average lead concentrations in the field screened soil samples collected at depths of 1-foot, 2-foot, 3-foot, 4-foot, and 5-foot below grade were 7,083 mg/kg, 20,340 mg/kg, 21,070 mg/kg, 14,388 mg/kg, and 5,752 mg/kg, respectively. The highest lead concentration detected in the subsurface was 97,921 mg/kg at the 2- to 3-foot depth interval.

2. Current Activities

2.1 Operations Section

December 17-21, 2012

During the Week of 12/17/2012, operations continued in areas along the southeastern portion of the site. Contaminated, non-hazardous soils were excavated, stockpiled, and shipped off-site for disposal. As of 12/21/2012, approximately 2000 tons of soil and debris was removed and stockpiled with 1,787 tons shipped off-site for disposal.

Excavated areas were backfilled with certified clean fill meeting the NYS DEC unrestricted use criteria. Approximately 1,210 tons of clean fill was brought on site to backfill excavation areas.

Representative post excavation samples were collected from areas along the southeast section of the site. Sidewall samples were also collected along the site perimeter. Samples were analyzed using a field XRF and shipped to the EPA Edison Laboratory for confirmation analysis. Following this section is a summary table of samples with their respective results.

December 23, 2012 – January 6, 2013
No site activities during this time period.

January 7 – 11, 2013

During the week of 1/7/2013, excavation began in areas determined to contain RCRA hazardous waste. Approximately 1,960 tons of soil was excavated during this period. Site excavations covered the south-central and southwestern portion of the site. Excavations ranged from 5 -7 ft in depth. During excavation subsurface concrete and brick walls were observed below grade that was consistent with the footprint of the former Jewett facility. Remnants of clay pots used in the former white lead manufacturing process were also observed embedded within some of the subsurface concrete walls. Those walls were removed and will be disposed with the hazardous waste soil.

Shipping of non-hazardous waste soils continued on 1/7/2013 with approximately 250 tons of soil shipped off site for disposal. On 1/8/2013, shipping of RCRA hazardous waste soils began with 1,474 tons shipped off site for treatment and disposal by the end of the reporting period.

Eight (8) post excavation samples were collected at the base of the excavated areas. Samples were screened using a field XRF and submitted for laboratory confirmation analysis. All laboratory sample results for base samples collected during the week of 1/7/2013 were below the site action level of 800 ppm. One base sample (Sample # 25) was reported at 420 ppm. Orange demarcation fence was installed at the base of that area prior to backfilling. All other base samples collected during this week were below 400 ppm. Following this section is a summary table of samples with their respective results.

Eight (8) sidewall samples were collected during this period. Two (2) of the sidewall samples were collected along the southwestern portion of the site, along the site perimeter and the Park Ave. sidewalk. Both of these samples screened high at 12 inches (sample # 33) and 24 inches (sample #34) in depth.

The results of these two samples were consistent with materials excavated adjacent on site. Materials excavated adjacent to these samples contained many remnants of clay pots used in the former lead operations on site.

Where post excavation sample analysis indicated levels at or below the 800 ppm site action level, those areas were backfilled with certified clean fill meeting the NYS DEC unrestricted use criteria. Approximately 1,140 tons of clean fill was brought on site to backfill excavation areas.

Post Excavation Base and Sidewall Sampling Information						
Sample #	**Grid Cell**	**Sample Type**	**Sample Depth (ft)**	**Date Sampled**	**XRF Result(average of 3) (ppm)**	**Laboratory Result (ppm)**
1	D-3	Base	4	12/11/2012	277	240
2	D-1/D-2	Base	2	12/11/2012	251	270
3	D-1	Sidewall	1	12/11/2012	720	630
4	D-2/C-2	Base	8	12/11/2012	412	1600 * (18)
5	E-3	Sidewall (S)	4	12/11/2012	322	480
6	D-2	Sidewall (S)	2	12/11/2012	765	790
7	C-2	Sidewall (NE)	3.5	12/11/2012	712	590
8	E-3	Base	2	12/12/2012	80	170
9	E-4	Base	2	12/12/2012	38	81
10	F-4	Base	1	12/12/2012	581	580
11	E-3	Sidewall	1	12/12/2012	65	78
12	F-4	Sidewall	2	12/12/2012	24	16
13	F-4	Base	3	12/13/2012	184	190
14	D-4	Base	3	12/13/2012	85	18
Field XRF	C-2	Sidewall (NW)	3	12/14/2012	253	NA
Field XRF	C-2	Sidewall (NW)	5	12/14/2012	49	NA
15	C-3	Base	4	12/18/2012	90	80
16	C-4	Base	3	12/18/2012	18	9.1
17	B4	Sidewall (NE)	1	12/18/2012	88	71
18	C-3	Sidewall (NE)	1	12/18/2012	1237	1200
19	F-5	Base	5	1/8/2013	7	9.2
20	E-5	Base	5.5	1/8/2013	ND	5.9
21	G-6	Base	4	1/8/2013	10	8.2
22	G-5	Sidewall (S)	2	1/8/2013	44	36
23	E-5	Sidewall (SE)	3	1/8/2013	77	290
24	G-6	Sidewall (S)	1.5	1/8/2013	932	890
25	G-6	Base (2)	5.5	1/8/2013	386	420
26	F-6	Base	5.5	1/8/2013	103	95

27	G-8**	Base	7	1/10/2013	272	300
28	G-8	Sidewall (SW)	3.5	1/10/2013	147	140
29	G-8**	Base	1.5	1/10/2013	11	9.8
30	G-7	Base	5	1/10/2013	4	8.0
31	G-7	Sidewall (SW)	3	1/10/2013	481	460
32	E-5	Sidewall (SE)	4	1/11/2013	5	4.5
33	G-8	Sidewall (NW)	2	1/11/2013	36,300 ***	32,000
34	G-8	Sidewall (NW)	1	1/11/2013	2,426 *******	1,900

* Due to the initial laboratory result taken at 7 ft depth exceeding 800 ppm, additional soils in this area were removed down to 8 feet. A second sample was collected and analyzed using on-site XRF. The second sample was recorded at **18 ppm** and for safety reasons the excavated area was backfilled.

** Grid Area G-8 was excavated to 2 elevations due to demarcation wall of former Jewett facility. This resulted in the collection of 2 base samples. Contamination was observed at deeper depths within the old Jewett facility footprint.

*** Sample 33 is a sidewall sample collected 24 inches below the sidewalk area. It is an adjacent area to what appears to be the former foundation wall of a former Jewett Site building. This area was observed with higher levels of lead concentration and remnants of clay pots utilized in the Jewett operation. An additional sample (Sample 34) was collected at a depth of 1 foot and showed a significant decrease in the levels of lead contamination. The samples collected were to document conditions at the site perimeter.

Air Monitoring and Sampling Activities

During intrusive site activities, RST conducted air monitoring for PM-10 dust along with air sampling for lead. Results from monitoring and confirmation sampling did not indicate any levels of concern during this reporting period. Monitoring and sampling activities are not conducted during non-intrusive activities or during periods of rain.

Waste Tracking

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
Non-hazardous wasteLead contaminated soil 12/14/2012 – 01/07/2013	Soil	2,037 tons	Non-Haz: 001-085	None	ACUA LF
RCRA Hazardous Waste (D008)Lead Contaminated Soil01/08/2013 – 01/10/2013	Soil	1,474 tons	Haz 001-059	Clean Earth of NJ - Stabilization	GROWS LF APEX LF Niagara LF

2.2 Planning Section

The following actions are currently planned to occur during this removal action;

- Continue with excavation, stockpile, and off-site treatment / disposal of lead contaminated soil
- Post excavation sampling and analysis to verify that the cleanup goal of 800 ppm is achieved
- Backfilling excavated areas with certified clean fill meeting NYS DEC unrestricted use standards.

2.3 Logistics Section

Nothing to report

2.4 Finance Section

An increase request for additional remediation funding is in progress. This request was submitted due to increased costs to the project as a result of delays from Hurricane Sandy as well as an estimated increase in the volume of material required to be removed and disposed off-site.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$1,109,000.00	$550,000.00	$559,000.00	50.41%
RST Contractor	$36,000.00	$32,000.00	$4,000.00	11.11%
Intramural Costs				
Total Site Costs	$1,145,000.00	$582,000.00	$563,000.00	49.17%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

Not Applicable

3. Participating Entities

EPA is conducting this removal action under its CERCLA authority. EPA has and will continue to coordinate actions with many state and local organizations.

4. Personnel On Site

Agency / Organization	On-Site
EPA OSC	1
EPA ERRS Contractor	6
EPA RST Contractor	1

5. Definition of Terms

ACUA LF - Atlantic County Utility Authority Landfill, Egg Harbor Twp, NJ
CAMP – Community Air Monitoring Plan
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
EPA – U.S. Environmental Protection Agency
ERRS – Emergency and Rapid Response Service Contractor

mg/kg – milligrams per kilogram (also equivalent to parts per million, ppm)
mg/m3 – milligrams per cubic meter
NCP – National Contingency Plan, 40 CFR Part 300
NYC DOH – New York City Department of Health
NYC DOT – New York City Department of Transportation
NYS DEC – New York State Department of Environmental Conservation
ppm – parts per million
RAWP – Removal Action Work Plan
RST – Removal Support Team Contractor
TWA – Time Weighted Average

6. Additional sources of information

For additional information related to previous EPA activities, investigations, and reports related to the Jewett White Lead Site, please visit the following website: www.epaosc.org/jewettwhitelead

7. Situational Reference Materials

No information available at this time.